

FEB 7 1973

Docket No. 50-331

Mr. Duane Arnold
Chairman of the Board & President
Iowa Electric Light & Power Company
Security Building, P. O. Box 351
Cedar Rapids, Iowa 52406

Dear Mr. Arnold:

The Atomic Energy Commission staff evaluation of environmental impacts from operation of the Duane Arnold Energy Center has been based, in part, upon information provided by you to the effect that certain limits on the chemical and thermal quality of the closed-cycle cooling system discharge would not be exceeded. In addition, the staff has identified certain potential environmental impacts where adverse effects are not expected to be substantial, but where predictions need to be verified by monitoring and evaluation of actual operations and the ensuing environmental changes. In order to provide appropriate protection of the environment, it is requested that the Iowa Electric Light and Power Company prepare and submit to the Directorate of Licensing by March 15, 1973, proposed environmental technical specifications and bases for inclusion as Appendix B in the Duane Arnold Energy Center operating license. The technical specifications should address, but not be limited to, the areas described in the enclosure.

Please inform us within one week of your receipt of this letter, the date your submission will be available. Your reply should consist of three signed originals and 40 additional copies.

Sincerely,

Original signed by W. H. Regan, Jr.

Wm. H. Regan, Jr., Chief
Environmental Projects Branch #4
Directorate of Licensing

Enclosure:
Subject Outline for Environmental
Technical Specifications

cc: Newman, Reis & Axelrad

OFFICE ▶	1700 Connecticut Avenue, N.W., Suite 340 Washington, D.C. 20036	L:EP-4 <i>WR</i>	L:EP-4 <i>WHC</i>
SURNAME ▶		FAST.Mary:ES	WHRegan
DATE ▶		2/7/73	2/7/73

DISTRIBUTION:
AEC PDR
Local PDR
Docket File (ENVIRON)
RP Reading
EP-4 Reading
MHaflich, OGC
FAST.Mary, EP-4
RRPowell, BWR-1
RLWade, EP-2
KDance, ANL
PGustafson, ANL
RO (3) DRMueller
RSBoyd, ADBWR
HDenton, SS,L
WHRegan EP-4
AGiambusso, DDRP

LB

GUIDE FOR ENVIRONMENTAL TECHNICAL SPECIFICATIONS
FOR THE DUANE ARNOLD ENERGY CENTER

The required technical specifications should address, but not be limited to, the following:

1. Operating limits should be set for the closed-cycle cooling system discharge to cover:
 - a. Discharge temperature - including maximum temperature, changes and rates of change.
 - b. Total residual chlorine in the discharge.
 - c. Other plant chemicals in the discharge.
 - d. Fish kill at the intake structure by size, species and condition.
2. Monitoring and surveillance programs should be developed to cover:
 - a. Operating limits for 1. above, including description of instrumentation, sampling design, etc.
 - b. Entrainment of plankton and larval organisms through the system by size, species and condition.
 - c. Other water quality parameters such as sodium, sulfate, dissolved oxygen, etc.
 - d. The effects of plant operation on terrestrial and aquatic ecosystems (mammals, birds, invertebrates, vascular aquatic plants, plankton, periphyton, benthic fauna and fish).
3. Study and evaluation programs should be carried out to determine:
 - a. The effects of plant operation on selected fish populations, age-growth studies, etc.
 - b. Change in concentration of water quality parameters including potentially toxic chemicals in river water.